



Student Paper Series

Towards New Horizons in EU Research Policy
The changing role of the Directorate-General for Research
(and Innovation)

By Dr. Julia Stamm, EMPM 2013

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Towards New Horizons in EU Research Policy

The changing role of the Directorate-General for Research (and Innovation)

Master Thesis

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Executive summary

My EMPM Master thesis focuses on changing governance structures in European research policy and the role the European Commission is playing in this context. In particular, it aims at investigating whether we currently witness the transition of the European Commission's Directorate-General for Research (and Innovation) into a European research ministry.

In order to lay the ground for finding answers to this question, I first introduce the history of Community activities in the area of research and discuss the development of power relations between the different European players in the area. The concept of "agencification" and its consequences for the work, status and self-perception of the European Commission is looked at in particular depth.

In the following analytical chapter I argue that this paradigm shift is indeed taking place and that, among others elements, the new position of research as "shared competence" after the Lisbon Treaty, the relatively recent creation of two executive research agencies and strong leadership embodied in the person of the Commissioner for Research and Innovation have contributed decisively to the development.

The thesis is based on the analysis of both relevant literature and theory as well as on semi-structured interviews that I carried out with relevant stakeholders in Brussels, both from the European institutions and from concerned institutions, organizations, and associations, hence providing a sound mix of theoretical approaches and practical reflections.

Dr Julia Stamm has ample experience in European research management and international cooperation. From 2006 to 2011, she worked at the COST (European Co-operation in Science and Technology) Office in Brussels where she was in charge of the unit for social sciences and humanities. In early 2012, she moved to Berlin's WZB Social Science Center as the institute's Commissioner for International Affairs and Head of the Presidential Staff. As of 2014, she joins the European Commission's Directorate-General for Research and Innovation as Seconded National Expert.

1. Introduction

"*Citizens regain confidence in Europe*", titled the online edition of the German daily newspaper *Frankfurter Allgemeine Zeitung* in July 2013. The article (<http://www.faz.net/aktuell/politik/europaeische-union/neue-allensbach-analyse-das-vertrauen-in-die-eu-waechst-12284506.html>) was based on a recent survey carried out by the Allensbach Institute. It outlined that in the past European issues were of no great concern to German citizens and of almost no relevance for German elections. This seems to have changed, not least thanks to sovereign debt crisis in many European countries, which makes the public look more intently to Brussels. The topic of European integration has become closely linked to the national core areas of finance and economic policies.

According to the article, European integration seems to have become even more important to Germans, despite all scepticism regarding the financial risks attached to saving Member States in crisis. Forty per cent reply that the European unification is for them a reason to be happy instead of worrying, a first-time high in ten years. And sixty-three per cent agree with the statement, that "*we Europeans belong together, despite all the difficulties we are currently facing in Europe*". And what do the respondents associate with Europe? "Bureaucracy" and "regulation spleen" are among the top cited, but also "peace" and a "Europe without borders, where one can travel and work unhindered".

Overall good news, one could say. Yes, without any doubt, over the past sixty years, the European Union has become an integral part of our lives, of our daily realities, not only abstract and far away in Brussels, but very concrete. The influence of Europe on our day-to-day lives is omnipresent. 70 per cent of national regulations have their origins in the European Union (EU). Thanks to the EU, citizens can travel freely and make payments in many Member States with the same currency - the euro. But the European Union is also putting its stamp on other areas of our lives, such as student exchanges, consumer protection, or standards to ensure the quality of food or drinking water. It also regulates competition. Thanks to the EU, for instance a "eurotariff price cap" on mobile phone roaming charges was introduced, busses were made accessible for wheelchair users, and airlines have to give comprehensive information on airfares.

The influence of "Brussels", as the media likes to coin it, hence penetrates almost all areas of our lives. It is not surprising, then, that the European Union, its history, its institutions, its policies have become an appreciated subject of research. European studies figure among the most popular academic programmes in European universities. Decision-making procedures in the Union have been studied intensely, the relationships between the main stakeholders were analyzed, and we know everything about the staff working in the EU institutions.

My EMPM master thesis takes a closer look at one further important - but so far poorly researched - element of the European integration process: European research policy. In particular, it focuses on the development of an autonomous European research policy and the role the European Commission played in this context.

Since the entry into force of the Treaty of Lisbon in 2009, the area of research and technological development is a so-called *shared competence*, thus, falls into the category of policy areas belonging

into the realms of both the European Union and the Member States (MS). Not least due to the economic and financial crisis, research has been put on the forefront of the European agenda. Under the fashionable label "innovation", it has even entered the very heart of the EU's strategy to create growth and jobs by 2020 (the so called "Europe 2020" strategy). EU countries are encouraged to invest three per cent of their GDP in Research and Development (R&D). Together with the Member States, the EU is also working on realizing the *European Research Area* (ERA), a single space where researchers can circulate freely in order to work anywhere in the EU and where cross-border cooperation will be encouraged and supported.

The EU's major and most visible tool for promoting science on the European scale are its *Framework Programmes*. The current, seventh programme (FP7) disposes of a total budget of approx. 50.5 billion euros. Its successive programme, named *Horizon 2020*, will even exceed that amount. This new programme, which will span the period between 2014 and 2020, aims at strengthening the EU's position in science, fostering industrial leadership in innovation and addressing major societal concerns, such as climate change or an aging population.

A number of EU institutions and bodies deal with the topics of research and innovation. The EU's official website lists the following (http://europa.eu/pol/rd/index_en.htm):

- European Commission: Enterprise and Industry Department and Space Research; Research and Innovation; Joint Research Centre; Framework Programmes;
- European Parliament: Committee on Industry, Research and Energy;
- Council of the European Union: Competitiveness - internal market, industry and research; COST (European Cooperation in Science and Technology);
- European Economic and Social Committee: Single market, production and consumption;
- Committee of the Regions: Commission for education, youth, culture and research;
- EU agencies: Research Executive Agency (REA); European Research Council Executive Agency (ERCEA)

Hence, a number of very different actors are involved in the area of European research funding and European research policy. My thesis, however, will focus on the predominant role the European Commission and its Directorate-General for Research and Innovation (in short: DG Research or DG RTD) have in shaping EU research policy today. I will argue that, in the period between the 1950s - which saw the beginning of European activities in the area of Community research and research funding - and today - with the discussions around the shape and content of the new Framework Programme for Research *Horizon 2020* and the *European Research Area* -, the Directorate-General for Research and Innovation has evolved from exercising a predominantly project and budget administrating role to embodying what I will call a "European research ministry".

Hence, my research question is framed as follows:

Do we currently witness the transition of the European Commission's Directorate-General for Research (and Innovation) into a European research ministry?

I will argue that, among others elements, the new position of research as "shared competence" after the Lisbon Treaty, the relatively recent creation of two executive research agencies and strong leadership embodied in the person of the Commissioner for Research and Innovation have

contributed decisively to the development.

The answer to the above question has direct consequences for our future dealings with European research policy, and for the way European researchers, universities, research organizations and funding agencies have to position themselves with respect to "*the gentle monster Brussels*" (Jornitz 2012: 9). It will also affect the way national research policy-makers operate and the ways they interact with their European counterparts in Brussels. It will change the way research is being done in Europe - and it even might affect Europe's position globally.

In order to illustrate this paradigm shift, my thesis will start with a short introduction to the history of Community activities in the area of research. Setting the historical background is necessary for understanding recent and current developments in EU research policy. I will start with the beginnings of European activities in the field of research in the fifties around the ECSC (European Coal and Steel Community) and will close with the current discussions around Horizon 2020, the new European Framework Programme (FP) for Research.

The key chapter of my thesis will then discuss recent literature and theory regarding governance structures of EU research policy and the relations of power between the different European players in the area, such as the European Commission and the Council of the European Union - and the shifts that occurred in this relationship. The concept of 'agencification' and its consequences for the work, status and self-perception of the European Commission will be looked at in particular depth. Particular attention will be given to recent developments in the Directorate-General for Research and Innovation in terms of the creation of agencies (REA - the Research Executive Agency - and ERCEA - the European Research Council Executive Agency) and their respective portfolios.

Finally, I will dedicate some thoughts to the question of leadership in shaping European research policy - an area, which so far has been broadly neglected. What role does the person of the Commissioner for Research play for the directions European research policy has taken and is taking, and what can be said about the impact of the current Commissioner for Research Máire Geoghegan-Quinn?

Based on the observations and analysis in the previous chapters, the concluding chapter will attempt to formulate an informed guess on the future development of European research policy, on the interplay between the European and the national level in terms of research funding and on the changing roles of the different stakeholders.

My thesis will strongly rely on qualitative data collected via semi-structured interviews with a number of stakeholders whose inside knowledge can substantially contribute to answering the above research question.

A qualitative research approach corresponds best to my research interest. Under the broad headline 'qualitative research' one finds a variety of theoretic perspectives as well as various methods of data collection and analysis. The term qualitative research generally describes research that produces and analyses descriptive data – such as written or spoken expressions – or the observable behaviour of persons. Qualitative research is interested in the sense of a social phenomenon and its observation within its natural milieu. In qualitative research the studied object determines the choice of methods.

It is not the primary aim of qualitative research to examine and find more about what is already known; it rather wants to discover new territory and to develop empirically based theories and questions for further research while dealing with the research subject. Since there are hardly any empirical studies on the research topic at hand, and because this study therefore enters new territory, an open and non-standardised procedure in the sense of qualitative research was the most appropriate for the conception of this examination.

Hence, all chapters are based on relevant literature and on interviews that I carried out with relevant stakeholders in Brussels, both from the European institutions and from concerned institutions, organizations, and associations, hence providing a sound mix of theoretical approaches and practical reflections.

2. Integration through co-operation: A historical overview of the development of European research policy and funding

2.1 The beginnings of European research funding: From the European Coal and Steel Community (ECSC) to the Directorate-General for Research, Development and Education

The history of European Community research and research funding mirrors the history of Europe's growing-together; both developments occurred in parallel. It started off in 1952, with the signing of the Treaty establishing the European Coal and Steel Community (ECSC). This treaty marked the first step towards a common market in Europe. Furthermore, it also provided for the first steps for scientific cooperation of the six founding members (Germany, France, Belgium, Luxembourg, Netherlands, Italy) in the field of coal, steel and iron industry. The real architect of the ECSC was the French political economist Jean Monnet, the first chairman of the so-called High Authority, the predecessor of today's European Commission (EC). A follower of the functionalist school, Monnet was convinced that social and economic interlockings lead to integration processes, which, in turn, would result in the emergence of a new political structure outside the nation state (Grabert 2005: 3). With the Treaties of Rome in 1958, and the founding of the European Economic Community (EEC) and the European Atomic Energy Community (EURATOM), cooperation between member states expanded to additional sectors (eg agriculture) and the civilian use of nuclear energy. Importantly, some provisions in the contracts allowed for research activities to be organised in these particular areas.

Until the seventies the European level hardly played any role in both fundamental as well as applied research. The first institutionalisation efforts took place in only very few and very specific areas, especially at the intergovernmental level. The best example is CERN, the European Organization for Nuclear Research, which was founded in 1962 as an intergovernmental organization. CERN served as model for other European initiatives in the field of basic research, such as EMBO, the European Molecular Biology Organization, or ESO, the European Southern Observatory. The establishment of COST (European Cooperation in the field of Scientific and Technical Research) in 1973 as another important instrument of international research and development cooperation is also worth mentioning.

During the three post-war decades of joint European research efforts, we certainly cannot speak of research as "*a relevant independent community activity*" (Gaul/David 2009: 21). Nevertheless, it is safe to say that the first features of today's topics and classification of research at the EU level can be traced back to this period. This applies in particular to the statements of the then German Research Commissioner Ralf Dahrendorf, who, in the seventies, was the first to imagine a *European Research Area* implemented by the European institutions. Under Dahrendorf's auspices, a demanding work programme was elaborated, aiming at breaking down national barriers of scientific careers and creating an internal market for European research. Although the programme was not implemented, Dahrendorf still left his trace: In 1973, the new Directorate-General for Research, Development and Education was established, with Dahrendorf as the competent Commissioner and responsibilities also in the areas of health and environment, and the foundations for an independent and proactive research policy of the European Union were laid.

2.2 The second phase of European research funding: The first Framework Programmes for Research

While in the beginning, Community research efforts focused on the traditional core areas of Community cooperation, the second phase was characterised by a strong emphasis on the interests of industry. This phase was initiated by the adoption of the ESPRIT programme in 1982, which had been developed jointly with the European information and communications sector. Designed for pre-competitive research projects, the success of this programme showed the biggest shortcoming of existing Community research activities: "*lack of stringent design and unappropriately short-term funding cycles*" (ibid.). As a consequence of this analysis, the majority of the hitherto existing European funding initiatives were merged under the umbrella of the "First Framework Programme for Research" (1st FP). It lasted for four years and had a budget of 3.75 billion euros. The introduction of the Framework Programmes was a paradigm shift and constituted a far-reaching step toward a European research policy which was legitimized subsequently by the Single European Act (SEA) in 1986. The SEA created a sound legal basis and anchored the Research Framework Programmes as **the** central element of European activities in the field of research. The primary aim of the first FP was to attract more resources from the private sector, a focus which, in retrospect, was detrimental to a strong participation of universities and basic research institutions. Also, the programme proved to be very rigid and inflexible. Finally, due to the strong influence of the Member States, it could not yet become a clearly pronounced instrument of European research policy. Despite all drawbacks, the introduction of the first Framework Programme laid the foundation for a systematic research funding at the European level. Consequently, in the course of new treaty developments, such as the Treaty of Maastricht (1992) and the Treaty of Amsterdam (1997), the Research Framework Programmes rapidly grew in importance, both in terms of content and budget. While the first FP could only dispose of less than 4 billion euros, its eighth successor, known as *Horizon 2020*, will receive approx. 70 billion euros.

2.3 The third phase of European research funding: Towards a European Research Area

Despite growing budget and increasing width of content, such as the integration of basic research, the first Research Framework Programmes had little impact on the coordination of national activities in the field of science and research: the fragmentation of European research and European research remained unbroken. Writes Winnacker: "*European research is currently nothing more than the sum of the measures at national and EU level. These measures are poorly coordinated and the research structures of the countries so sealed off from each other, that transnational investments in the knowledge sector can not be fully effective*" (Winnacker 2012: 22). One of the main reasons for this fragmentation lies in the principle of subsidiarity. For a long period of time, subsidiarity remained the main basis of European research and funding policy and allowed the Member States to maintain their national plans and priorities. However, the interests of EU Member States and their limited willingness to integration in the area of research are not the only reason why the Framework Programmes contributed little to coordinating the national research agendas. Another reason may

be sought in the structure and functioning of the European Commission, and more precisely in the Directorate General for Research. Programme and budget management were considered to be the DG's primary task, not the design of the content, the policy part. Moreover, the processes that precede the entry into force of a new research framework programme were becoming increasingly complex and involved increasingly more actors - not least lobbyists. Conscious of that fact, the European Commission aimed already in the early nineties at a shift in emphasis away from pure distribution principles towards a more targeted support of cooperation. This, however, failed because of the resistance of the Member States, a fact I will turn back to later in this thesis. In the late nineties, significant efforts were undertaken to increase the openness of the Framework Programmes for academic research. A milestone for the reorientation of European research policy was a return to the concept of the *European Research Area*, initially coined by Lord Dahrendorf. This concept, which was surprisingly brought back to life by the Commission in 2000 in its Communication "*Towards a European Research Area*", got assigned a key role for advancing the European economy and its competitiveness. The entry into force of the Treaty of Lisbon in late 2009 was of central importance for the maturity of European research funding. Among many other aspects, the Treaty aimed to strengthen the independence of European research.

Since the entry into force of the Lisbon Treaty, the area of research and technological development is a so-called *shared competence*, thus, falls into the category of policy areas belonging to the realms of both the European Union and the Member States (MS). The competences of the EU are divided into three categories:

- Exclusive competence (Article 3 TFEU): Only the EU can act.
- Shared competence (Article 4 TFEU): Competences are shared between the EU and the Member States. Both the EU and its Member States may adopt legally binding acts in the area concerned requiring the Member States to harmonise their laws and legislation. The Member States can act only if the EU has chosen not to.
- Competence to support, coordinate or supplement the actions of the member states (Article 6 TFEU): In these areas, the EU cannot adopt legally binding acts requiring the Member States to harmonise their laws and regulation.¹

The Treaty defines the respective competence of the EU as a parallel jurisdiction to that of the Member States and enshrines the realisation of the *European Research Area* as the central task of the EU. In short, it paved the way for an autonomous EU research policy.

¹ The two principal treaties on which the EU is based are the *Treaty on European Union* (TEU; also known as Maastricht Treaty, effective since 1993) and the *Treaty on the Functioning of the European Union* (TFEU; also known as Treaty of Rome, effective since 1958). These main treaties have been altered by amending treaties at least once a decade since they each came into force, the latest being the Treaty of Lisbon which came into force in 2009.

2.4 Changing framework conditions: a paradigm shift in EU research funding policy

In sum, it can be said that the development of EU research funding to its present state took nearly sixty years. Until the entry into force of the Lisbon Treaty, research and its promotion at the European level have been understood primarily as an instrument for strengthening the economy. EU research funding was equated with supporting industry. This credo changed for the first time in the fifth Research Framework Programme (1998-2002), in which the industry focus was shifted in order to allow for some more 'real science' to be funded. Basic research, international cooperation, and the inclusion of the humanities and social sciences were important components of this FP. And they proved to be successful: while in the second FP (1987-1991) two-thirds of the total funding were awarded to the industrial sector, those two thirds could be claimed by academic partners in the 6th FP (2002-2007) - and this trend continues. Another paradigm shift occurred in the first decade of the new millennium. Faced with increasing competition, not only with the U.S. but also with China, Japan, etc., the focus shifted again. The promotion of innovation was now perceived as the key for competitiveness. In addition to this, with the inclusion of the former Eastern Bloc countries into the European Union, the inner workings of the Union changed as well. Finally, the still ongoing financial and economic crisis added to the pressure. 'Competitiveness' joined 'innovation' as the new buzzword.

In this context, the Commission's renaming of its Directorate-General for Research in "Research and Innovation" was programmatic, too. It coincided with the taking office of the current incumbent Commissioner Máire Geoghegan-Quinn. Since then, 'research' and 'innovation' are no longer to be separated in the EU jargon. A Commission official observes quite critically: *"There are two ways to look at that. One way is to say that did the main focus is on innovation, and it is no coincidence that in this DG we became research AND innovation because the Commission is interested in outputs, in easy achievements. I think the new Framework Programme reflects that. There is some sort of obsession in favour of innovation. Whether it works or not is another matter."* This development was further enhanced by the economic and financial crisis, in the course of which a counter-movement to the aforementioned academic shift evolved, which demanded a greater emphasis on the (market) application of the funded projects. With the design of *Horizon 2020*, the successor of the seventh Research Framework Programme, the European Commission is now seeking to *"square the circle"*, according to the Head of a national Liaison Office of Research Organisations: as a key element for the implementation of the Europe 2020 strategy, *Horizon 2020* shall represent Europe's response to the economic crisis, be of interest to both academics and industry, make a significant contribution to contemporary societal challenges and also further the EU's global position in the areas of research, innovation and technology. Research has certainly entered the very core of European politics.

3. The buildup of executive governance in European research policy

3.1 One step forwards, two steps backwards: Supranational vs intergovernmental Community research activities

The Commission's current considerations on the shape and content of *Horizon 2020* take place in the context of the realisation of a common *European Research Area* (ERA). In the first section of this paper, I have provided a short overview on the historical development of European research policy. However, in order to understand the developments up to now, we also have to consider this evolution from another angle, namely by looking at the dynamics of the interaction of institutions at the European level. What role do the key players of European research policy (such as the European Commission or the European Council) play when it comes to realising a Community research policy? And what insights do we gain with respect to the future governance of the *European Research Area*? As already mentioned, the first Community research activities were launched in the fifties. At that time, the security of energy supply was key for European governments, resulting in the first European activities focusing on this area. While until today CERN clearly has an intergovernmental character (i.e. a cooperative project outside the European institutions and dominated by national governments), EURATOM was enshrined in the founding treaties of the EU. However, since nuclear energy was seen as a core national interest and, thus, was less suited for supra-national research efforts, EURATOM has seen little success. Using the example of the EURATOM, the fundamental areas of conflict in European research policy from its beginnings until today can be identified (Guzetti 1995: 24ff.):

- 1) Within the Community there is consensus that a "technology gap" exists between Europe and other economic powers.
- 2) In particular, smaller member states lack the resources to build strong and sustainable national science systems. These countries are rather open for stronger co-operation in the field of research. On the other hand, larger member states usually have their own strong research base. Hence, their enthusiasm regarding the integration of research policies at European level is much lower.
- 3) Related to this is the prevalence of the principle of 'juste retour', the particular claim of the bigger EU member states: they aim to achieve a balance between their (financial) contributions to Community cooperation activities and what they get out of it.

In the sixties, the discussion about the "technology gap" was revived, prompting the European Commission to propose first initiatives to overcome this gap. To her great frustration, member countries responded to this by creating other intergovernmental bodies that were established outside the European institutional framework. In response, the European Commission argued for a transfer of competences to the European level, which should make it possible to convert existing cooperation structures in a uniform institutional setting. However, this was not provided for by the Treaties, which is why the European Commission turned to "softer" methods such as benchmarking or coordination activities. Using "soft forms of governance", the Commission tried to keep her cards in the game: "*The Commission argued that 'It would be helpful if the efforts of each country could be*

compared at a European level. It should also be possible to establish optimum conditions in which measures taken in individual countries may complement and mutually reinforce each other' (European Commission 1969)" (Jansen/Semmel 2010: 15).

The reaction of the Member States to this attempt consisted in a renewed wave of creating intergovernmental organisations, such as EMBO (1964), ESA (1975) or COST (1971). Let us just take the example of COST to illustrate what happened. Participation in the COST framework is possible for each member state according to the 'A-la-carte principle': each country is free to decide in which research areas it wants to get involved and where it does not. This principle still applies today. COST is financed via the Research Framework Programme - without any authority on the part of the Commission. Hence, the Commission is faced with an instrument for European research cooperation which she cannot control, but must finance - a rather unsatisfying situation.

In the seventies, the European Commission changed her tactics. By then, the Directorate-General for Research had been established and Research Commissioner Dahrendorf first proposed an initiative that had a strong resemblance to the ERA initiative from 2000: *"improving the mobility of scientists within this single research area, a funding mechanism for joint European projects, establishment of fora for international exchange, linking institutions and scientists in strategic areas, joint efforts in long-term and costly research projects, and joint use of expensive research infrastructures for the benefit of all EU member states"* (Guzetti 1995: 50). A few of these proposals were adopted by the Council, but only of a non-binding nature. In 1974, the Council also set up the European Science Foundation (ESF) which quickly developed into a platform for international scientific co-operation outside the institutional and legal European framework.

The Commission's efforts to initiate a common European research policy suffered further draw-backs in the wake of the oil crisis and economic tensions of the mid-seventies. The "technology gap" still prevailed, but European governments still did not embrace the "cooperative option": *"Preferences were still focused on autonomy and unilateral strategies"* (Jansen/Semmel 2010: 16).

In the early eighties, however, governments began to realize that this strategy did not lead to success. Unilateralism had failed, and governments now turned to a mode of "policy adaptation" (ibid.). Taking advantage of this adaptive mood, the Commission succeeded, in cooperation with the Member States, to launch ESPRIT, RACE and the first European Framework Programme for Research. The Commission also took advantage of the opportunity to convince governments to cooperate at least in the pre-competitive research, as this threatened national economic interests least.

Despite this overall positive development, the creation of EUREKA in 1985 can be seen as a setback for the community efforts in the area of research. EUREKA, a kind of intergovernmental counterpart to the ESPRIT programme, was set up completely outside the European institutional framework and still operates on a strict bottom-up approach: companies and academic institutions look for international partners and then contact their respective national EUREKA Coordinators, which examine the applications. Once the joint scientific enterprise starts, each participating country pays "its" institution - an easy way out of the 'juste retour' problem.

The history of Community research efforts can thus be characterised as a constant "'push and pull' movement by its two main players, the European Commission and the European Council. While the Commission did not give up in her efforts to push for a more integrated system of research in Europe

(which it would control), the Member States did not want to lose their prerogatives. They did commit to joint research efforts, provided they stayed in control.

3.2 The importance of the ERA process for strengthening Community research activities

The situation started to change, however, mainly due to two recent events: the anchoring of research as "shared competence" in the Treaty and the impetus of creating a *European Research Area* to increase Europe's competitiveness - the latter also being anchored in the Lisbon Treaty and steered by the European Commission.

The history of the idea of a *European Research Area* is closely associated with the names of three European Commissioners for Research, Ralf Dahrendorf in the 1970s, Antonio Ruberti in the mid-1990s and Philippe Busquin at the very beginning of the 21st century.

Overcoming the fragmentation of Europe in the field of research is the most important objective of the ERA process. The existence of such fragmentation is not an invention of Commissioners in Brussels. Also Winnacker states "*Instead of a single European research area, there are almost 40, just like there are countries in Europe, each of them driven by their own government agendas, their own research funding organizations [...]. Cooperation is limited. Fragmentation proves to be the corset that restricts competition, prevents quality comparisons and hampers mobility. Consequently, there is overlap, duplication and double funding, a lack of critical mass, and ultimately, a lot of mediocrity [...]*" (Winnacker 2012: 21, own translation).

With her communication "*Towards a European Research Area*" published under Busquin, the Commission questioned for the first time the traditional division of labour in the field of education and research policy - and urged Member States to take on an active role. According to Edler and Kuhlmann (2012: 71), this paper contained "*the first sweeping reform attempt in European research policy-making in the 20 years before and took the research community in Europe totally by surprise*".

Idealists believe that with the introduction of the ERA concept and associated instruments such as ERA-Nets, the Joint Technology Initiatives, the European Institute for Technology (EIT) and the European Research Council (ERC) a new era for Europe's research policy began, the post-national era. Even if not all observers share this opinion, as yet there is no question that something important is happening, something that will forever alter Europe's science structures. For the German Science Council, for example, contributing to shaping the European Research Area is without alternative: Germany can "*only maintain its international competitiveness in close cooperation with the other European countries [...]*" (Wissenschaftsrat 2010: 87).

From a science-policy perspective, Europe consists of two main actors: on the one hand the European institutions and on the other - and significantly larger in numbers - the national scientists, scientific institutions and science policy organization. Hence, the national dimension also plays a major role for the ERA concept. The ERA process aims to strengthen the interaction between the various regional and national actors. Deepened cooperation, pooling of resources, the opening of funding programmes, the possibility of structured competition, the organization of joint research infrastructures for effectively solving common problems - these are just some approaches that will promote the ERA process. But beyond that, against the background of the common European history

and European scientific traditions, ERA is also supposed to dismantle barriers that were previously preventing intra-European cooperation.

The ERA process was officially launched in 2000, as a key concept for the implementation of the Lisbon Agenda. The ERA concept even entered the 2007 Lisbon Treaty, which stated that the Union "*shall achieve a European Research Area in which researchers, scientific knowledge and technology circulate freely*" (Article 163) and that the European Council and the European Parliament "*shall establish the necessary measures for the implementation of the European research area*" (Article 166).

Furthermore, in 2006 the European Commission launched a comprehensive consultation on the *European Research Area*. The results of the ensuing debates clearly show that in particular the concepts of openness, sharing of knowledge and the creation of an internal market for scientists, received considerable support among European stakeholders. Also, the signalling effect, which the creation of the *European Research Area* can have both internally and externally, is not to be underestimated. While the European Union originally started as an economic area (which was indeed for a long time reflected in the research policy), research now joins the economy as an equal partner.

Even though in the shadow of the economic and financial crisis, the ERA process lost some momentum, it is generally agreed that a joint research and research policy is a key element to put Europe back "back on track". In this spirit, in 2010, the European Commission launched its Communication "*Europe 2020*", calling on Member States to stick to the three-per-cent target for expenditure on research and development (R&D), and also called for greater investment of the private sector. Under the heading "Smart Growth", R&D became part of the so-called "Innovation Union", and in June 2010 the European Council adopted the "Europe 2020 "strategy" as the successor of the failed Lisbon Agenda. So things are moving. To keep momentum, the European Commission presented a new Communication in July 2012: "*A Reinforced European Research Area - Partnership for Excellence and Growth*". It contained recommendations on the following five priorities: more effective national research systems, optimal trans-national cooperation and competition, an open labour market for researchers, and finally gender equality and gender mainstreaming in research.

What can be said, for certain, is that the initially illustrated dynamics - the European Commission pushing and the Member States pulling - are not entirely valid anymore. Not least due to the massive challenges Europe is facing, research and development have been put on the agenda. Member States now slowly, but surely, recognize the need for integrating national research agendas and funding within and on the European arena. Hence, it is safe to say that that we will witness an ever-growing interaction between the national and the European level in the near future. The Joint Programming Initiatives are just an example. European funding and research policy-making is gaining in importance, also with regard to national competition.

But "Brussels" influence starts to go even beyond that. Some countries use the European approach as an example for re-modelling their own research programmes. As observes a Head of a national

Liaison Office of Research Organisations: *"We do witness a massive trend of big countries such as Spain or Italy modelling their research programmes according to the EU example. Hence, the national programmes are designed according to EU standards, according to EU issues or EU classifications. Romania does it rather well. Luxemburg, being a small country, does it anyway. But now, in the crisis, Italy and Spain, too"*.

Do these developments go hand in hand with a changing self-perception and even a new assertiveness of the European body mainly in charge of research policy? In order to answer this question, let us now take a closer look at the evolution and current state of executive governance in research policy at the European level.

3.3 The building of executive governance in EU research policy

In the aftermath of the Second World War, research developed as a distinct area of public policy, when a broad range of European countries engaged in developing national science policies and the setting-up of according institutional structures. According to Gornitzka, *"worldwide, governments have developed executive capacity, visible in state bureaucracies to coordinate scientific research, as the norm that states should direct science had been spreading, regardless of whether these states had any science to coordinate"* (Gornitzka 2012: 9).

This was also true for the EU. At the European level, the presence of executive capacity in the area of research is visible first and foremost in the structure of the European Commission's portfolios and administrative Directorates-General. As with the national level, the question was not whether there should be a certain degree of executive responsibility for research - there seemed to be no doubt about it. The question rather related to the nature of this responsibility: should it be supranational or intergovernmental, should research policy serve industrial policy or should it have an independent status? These questions remained open, as can be testified by the tensions between the Commission's ambition to set a European research policy and the Member States reluctance in this matter (as illustrated in the previous chapter).

Under Altiero Spinelli, who became Commissioner for Research and Industry in 1970, Community activities in the area of research were strongly linked to the Community's industrial policy. According to him, European involvement in the area of research had to be subordinated to industrial policy instead of it being a generic policy area. The situation changed slightly when Ralf Dahrendorf became Commissioner in 1973. He did not retain industry in his portfolio but rather focused on reframing European activities in the area of research: *"Unlike Spinelli's position, Dahrendorf envisaged a European research policy that was based on national policies, and the Community effort should be to coordinate these policies"*. (ibid.: 10).

Hence, national policies and preferences should prevail, and the task of the European level (meaning: the respective Commission services) was to bring those together. However, although, as explained in the previous chapter, Community research in the 1970s was intergovernmental rather than supranational, the Commission's reorganisation in 1973 paved the way for a new era. The establishment of a new Directorate-General for Research (and Education) can be considered to have been the formative event in the evolution of executive capacity for a European research policy:

"Establishing a sector-specific, full-time administration in the Commission services established European research policy in its own right and provided it with an organisational memory and policy-making capacity. Other DGs continued to have stakes in developing EU R&D policy for their sectors [...], yet this establishment made one DG the lead, self-standing administrative body" (ibid.: 11). Although, in its early years, this new DG could do only little in terms of developing a 'real' European research policy, the creation of a designated executive branch allowed small, but continuous steps to happen in this respect.

As already stated, the introduction of the Community's Framework Programmes for Research was a rather big step. In order to support this programme and its successors - and their management and implementation -, a number of new structures and procedures had to be developed and put into place. During this development, the Directorate-General for Research was in the very heart of the decision-making and implementing machinery, with the number of its officers rapidly growing to more than 1.000 by the early 21st century (Spence and Edwards 2006).

What has to be emphasized, however, is that the main task of the DG for Research, namely designing and managing the Framework Programmes, contradicts the principles of indirect implementation of EU legislation. The FPs were directly managed by the Commission services: researchers could submit their proposals directly to the Commission who, in turn, did not have to integrate national administration or involve national filters in the decision-making procedure. This constitutes a fundamental difference compared to the other Directorates General in the European Commission. At the same time, it meant that a considerable amount of time had to be dedicated to programme management and not to policy-making.

Why was DG Research content with managing research programmes rather than designing research policies? According to Banchoff (2002), a situation of inertia can be blamed for this. Taking on a process-driven perspective, he argues that the patterns of interaction had become institutionalised by the end of the 1990. This, in turn, undercut the politically articulated goals of moving common EU research policy beyond the FP and its distributive nature. Bacharoff blames the very organisation of DG Research as the main reason for this inertia: contrary to other Commission services (and to the national research ministries), the executive branch of EU research policy focused on running increasingly complex and comprehensive Framework Programmes - and on making sure that formal rules going along with it were respected. Changing these established organizational patterns would have been very costly, and hence, if we believe the path-dependency argument, very unlikely. Gornitzka shares Bacharoff's analysis and notes: *"When the FP was established it was thus such a defining moment that it froze European science governance to distributive politics and hence also as a domain of executive dominance underpinned by strong, sectoral internal policy networks"* (Gornitzka 2012: 18).

Now, why would this situation change? If we focus on the development of European activities in the area of R&D from the fifties until the early 20-st century, my claim that the Directorate-General for Research is currently evolving from a programme administrator into a European research ministry seems difficult to believe. Even Gornitzka argues that *"as long as the policy saliency and uncertainty of research policy, the organisation of executive capacity have not changed, the pattern established in the 1990s will also be predominant in the following decade"* (ibid: 19). Still today, research policy as such is no "hot" topic, and no election can be won with it.

Despite these facts, I argue that we are currently witnessing a remarkable shift: executive governance in EU research policy is asserting itself. On the following pages, I will attempt to prove this hypothesis along three main lines of argumentation that condition each other:

- A changing geopolitical context;
- An ongoing "agencification" trend;
- The importance of leadership in asserting and shaping European research policy.

I argue that the combination of these three trends contributes decisively to a new understanding and increased importance of research policy-making at the European level, thus, to new horizons in EU research policy.

4. Towards a new era for European research policy - The new assertiveness of the Commissioner for Research and Innovation

4.1 The EU's research policy and its implications in a changing context

4.1.1 After the Lisbon Treaty: A new environment for the EU's research policy

As described before, research policy has been broadly neglected over the past fifty years or so. And still it does not produce major headlines. EU research policy is an area left to a small number of EU research experts. Its debates are highly technical and of little interest to both politicians and the general public.

Despite these seemingly unfavourable conditions, it has to be stated very clearly, that the political rhetoric regarding the importance of research for the European Union and research promotion at the European level has changed quite significantly during the past few years. Not least due to the economic and financial crisis, research has been put on the forefront of the European agenda. Under the fashionable label "innovation", it has even entered the very heart of the EU's strategy to create growth and jobs by 2020 (the so called "Europe 2020" strategy). EU countries are encouraged to invest three per cent of their GDP in Research and Development (R&D). And with the 2007 Lisbon Treaty research became one of the areas of "shared competence" between the Member States and the Union.²

With the Lisbon Treaty, the promotion of scientific and technological advance in its own right has, for the first time, become a special objective of the European Union. Article 3(3) TFEU states that "*the EU shall promote scientific and technological advance*". As I outlined earlier, the Community previously aimed to promote research activities primarily in order to support the competitiveness of its industry. Thanks to Lisbon, for the first time, the distribution of competences between the

² The Lisbon Treaty introduced substantial changes in the Treaty on the European Union and in the Treaty Establishing the European Community, which has been renamed as Treaty on the Functioning of the European Union.

European Union and the Member States in the areas of research, technological development and space was clarified. It was also stated, however, that "...the exercise of that competence shall not result in Member States being prevented from exercising theirs." This means that there is a difference between the shared competence stated for the specific domains listed under Article 4(2) TFEU and the shared competence stipulated by Article 4(3) for the areas of research, technological development and space: in the first case, the Member States exercise their powers in so far as the Union has not exercised its competence; in the latter, another condition was added, namely that the exercise of the Union of its competence cannot prevent the Member States from exercising their powers. The Union and the Member States, thus, have to collaborate very closely.

Together with the Member States, the EU is also working on realizing the *European Research Area* (ERA), a single space where researchers, scientific knowledge and technology can circulate freely in order to work anywhere in the EU and where cross-border cooperation will be encouraged and supported. The introduction of the concept of the European Research Area is the Lisbon's Treaty most far-reaching provision with regard to research policy. ERA is presented as the way to strengthen the scientific and technological bases of the Union. Article 182(5) TFEU entitles the Union to adopt all the measures it deems necessary to achieve the ERA - the Commission may even propose the adoption of regulations, directives or decisions according to the ordinary legislative procedure.

Next to "innovation", "knowledge" has become a further buzzword in the European rhetoric. The "knowledge economy" has been proclaimed, and the so-called "knowledge sectors" are more and more perceived as some sort of universal remedy or problem-solver to the Union's problematic economic situation. I share Gornitzka's analysis that "*the attention to 'knowledge policy' areas is unprecedented in the history of the EU*" (Gornitzka 2012: 20). Indeed, "*attention to Europe's innovative capacity, economic and scientific competitiveness, and universities seems to have been at an all-time high, especially in the mid-2000s*" (ibid:). Many high-level initiatives point to the same direction, such as the establishment of the European Institute of Innovation and Technology (EIT) or the appointment of the first Chief Scientific Adviser (Prof. Anne Glover) to the President of the European Commission.

I argue that the European Commission, and in particular its Directorate-General for Research under its three most recent Commissioners has recognized this particularly favourable window of opportunities to transform European activities in the area of research, shifting them from management to policy. One excellent example to illustrate this Commission-driven shift is the debate around content and shape of the new Programme for Research *Horizon 2020*.

4.1.2 The Commission's role in designing and shaping 'Horizon 2020'

As already mentioned, the EU's activities in the area of research funding are subsumed in the so-called *European Research Framework Programmes* since 1984. The FP is the world's largest programme for research funding and as such of ever-growing importance. With the seventh FP, a Framework Programme for the first time spanned a period of seven years (2007-2013) and thus the same period as the Multi-annual Financial Perspectives of the European Union. This will continue in 2014 with the launch of the new Programme *Horizon 2020*. While the seventh programme disposed

of a total budget of approx. 50.5 billion euros, *Horizon 2020* will be able to spend 70 billion euros. This new programme, which will span the period between 2014 and 2020, aims at strengthening the EU's position in science, strengthening industrial leadership in innovation and address major societal concerns, such as climate change or an aging population - in short: help Europe get back on the centre stage of research performance (and research reputation) in the world.

The Framework Programme is approved jointly by the Council and the European Parliament following the so-called "ordinary legislative procedure" (the former "co-decision" procedure). During this procedure, the scientific and technological objectives, the broad research priorities, the maximum overall amount and the provisional allocation of resources as well as the details of the Community's financial contribution shall be established. The first draft of a new Framework Programme, however, is drawn up by the European Commission and is presented about two years before the start of a new programme. Although, according to the Lisbon Treaty, the European Council and the European Parliament have the final say on the programme, one has to bear in mind the decisive freedom and room for manoeuvre of the European Commission when drawing up the proposal. It is the Commission, or rather DG Research, that sets the tone. They conceive and prepare the overall FP guidelines, work programmes, etc. As says a long-time observer of the Brussels research policy scene: *"Especially when you're working in Brussels, then you can see very well over the years how this apparatus works. And of course you can say, the Commission only proposes, and it's the Council and the Parliament that ultimately decide. [...] And of course, you can then prepare another 100,000 amendments in Parliament, and of course, the Member States sit together and say: We want this and not that. But crucial is nonetheless what the Commission's initial proposal puts on the table. [...] In Parliament, decisions are quite often made out of ignorance, simply because the deputies cannot deal in detail with so many questions and issues in detail. This is easy to understand. And in the Member States, it is ultimately a cut and thrust and haggle over particular interests in the Council of Ministers."* What has to be underlined, therefore, is the fact that the content of the FPs always was - and still is - mainly driven by the European Commission. They do consult the Member States via their Programme Committees and other such bodies, but the main input comes from the Commission services - while member States often tend to 'get stuck' in fights over details.

It has to be stated, though, that in the recent past, the European Commission regularly launched a number of broad-based external consultations. As explains a member of staff in the Office of the Director-General for Research and Innovation: *"We did a big consultation for Horizon 2020 in which we got thousands of contributions from different stakeholders on what will be the role of research and innovation. And from there on, we could identify the challenges and see what contribution research and innovation could bring to solve those societal challenges."*

The European Commission pursues this increasingly participatory approach since 2006. As confirms a national research lobbyist: *"The Commission hardly does anything - and the many consultations prove that - without having asked the stakeholders"*. Thus, in order to be heard, it is advisable for the numerous scientific associations, universities, research institutes, etc to partner instead of trying to persuade the Commission staff on their own. She explains: *"A lot of our political lobbying consists in meeting with colleagues here in Brussels, to jointly prepare [...] input for amendments in Parliament [...] and submit joint papers and thoughts. [...] And so far [...] we are very*

successful in our advocacy."

What explains the increase of public consultations by DG Research in recent years? One reason is certainly that, in the past, the Commission has been accused of working very 'top-down', of doing too much their own thing without involving the scientific community. She was accused of holding "closed shop" events, and to use only those to draw up their work programmes. In part, the recent increase in stakeholder surveys is certainly due to this discontent and these allegations. But can they also be a means to maintain the say on the shape and content of the programmes? The national research lobbyist wonders: *"I think also, perhaps triggered by this discontent and this criticism that the Commission then realized that it's wonderful if you ask very many stakeholders because in the end, it makes it easier for you to do what you want. I am convinced that may not have been the starting position, but if you read through some questions of a Commission consultation, then you might come to the conclusion that you already know what will stand there at the end."*

A member of staff in the Office of the Director-General for Research and Innovation from the European Commission has another take on the reasoning behind the increased consultation efforts. She explains: *"For the big programmes, it is logic that we consult the stakeholder community with new media [...] This is for us an enormous help and what we have done for Horizon 2020 is that we systematically analyzed them and then you get towards the big ticket. Or you get towards the challenges. Or we bundle them in terms of research and innovation, simplification, you know. So it is also a basis for us to draft afterwards the Commission proposal on that basis. And the better you consult, the better the support is afterwards for the proposal."*

The consultation method and the evaluation, - which, as she says, is done in-house, hence, by Commission staff -, is not always easy for outsiders to understand. It is questionable how those numerous and diverse submissions can be analysed properly by Commission staff who has to perform this challenging task on top of their other duties.

In any case, it is safe to say that the European Commission steers the content of the European activities in the area of research. Based on her draft, the new programme *Horizon 2020* is organised into four columns: *"Excellent science"* (this column contains the European Research Council, the Marie Curie Actions, the Future and Emerging Technologies and Research Infrastructures), *"Industrial Leadership"* (divided into 'Leadership in Enabling and Industrial Technologies', "Access to Risk Finance" and "Innovation in SME"), six so-called *"Societal Challenges"* and finally the *"Direct actions of the Joint Research Centre"*.

Overall, says the Head of a Research Lobbyist Organization, there is agreement within the European research community regarding the *Horizon 2020* proposal by the European Commission: *"There is a very strong sense that generally people are fairly positive about Horizon 2020 I think it is a kind of fairly good proposal. People are pleased that the ERC has kept a prominent role, maybe less so that Marie Curie does not have quite as prominent a role as maybe it should have - but generally very supportive of the idea of it being based on excellence."* However, she also expresses criticism regarding the specific design of the new programme: *"The biggest concern would be that there are still so many unanswered questions about structure and how it works. Okay, we have got these grand*

challenges, but how do these grand challenges actually translate into an implementation structure, and it is really going to be any more simple for everybody at the end of the day? You know, to get something where you actually have people applying, you have to take synthesis grand challenges and kind of make them into mini-challenges and then make them into kind of individual topics - and there still does not seem to be an awful lot of clarity on that process and how that is going to work. And that is quite a big concern."

Again, just like with the consultations, the devil lies in the detail. What seems quite obvious is that the European Commission has an interest to be the one who has the final say on the precise content of Horizon's challenges. They want to make sure to be able to feed in the policy questions they consider important. This is very much in line with the new claim to leadership that I perceive in the activities of the DG for Research and Innovation.

4.1.3 A new claim to leadership in European research policy

The main purpose of this thesis is to find out whether my hypothesis - DG Research evolving from a programme administrator into a European research ministry - is true. The answer to this question should not be left only to an analysis of events and trends. It is also important to allow the directly involved stakeholders to have their say. In order to do this, I have addressed the same question "Is the DG for Research and Innovation developing from a programme manager into some kind of research ministry?" to both Commission officials and people working in institutions and organisations orbiting around the field of EU research policy.

It is interesting to contrast the opinions of Commission officials on what is currently happening with the judgement of 'outside' observers. A Head of Unit in DG Research, fully endorses my observation of the DG evolving into a research ministry and think that this is exactly what should be happening: *"I really think we should become much more strategic and much more policy-oriented. So in the past, the main reason for DG Research to exist has been the fact that we control so much money - so we manage it. But that is not enough, that is not a raison d'être for the future. So we really need to play a much more strategic role and a much more policy-oriented role. [...] I think this is a natural logic. [...] Now we have to go into the next phase, which is much more trying to develop strategic agendas, strategic partnerships. And he continues: "You are good informed here. Because it is not a big story... because there is a little group in DG Research working on this topic and I am part of it. So you are well informed then. [...] We do not know when it will happen but we are working on it." And further: "It is internal. This is really a company secret [...]. But, of course, some of the things are evident. We need to be much more strategic, we need to know much better the member states, we need to be able to understand much better the national systems of research and innovation etc. These are all the things which are quite logical, like a ministry."*

While for the Head of Unit in DG Research the Commission's ambitions seems to be somewhat "top-secret", observers such as the Head of a Research Lobbyist Organization consider the process to be quite logic: *"I think it is a reality of the fact that research has a different standing under the new*

Lisbon Treaty. They do have more legislative, potential legislative powers. [...] ERA is enshrined in the Treaty now. That puts it in that position. So essentially, whether you agree with it or do not agree with it, that is the reality. That is what happened. That is what member states have agreed to. So I think the Commission has been given those kind of additional responsibilities and additional powers, there is something kind of natural about the fact that this will change the nature of it slightly." For the Head of a Research Lobbyist Organization, hence, the evolution from research administration to research ministry is something natural, something that results from the Treaty changes and is a logical consequence of enhanced legislative power.

For another Head of Unit in DG Research, it is not so much a natural process but certainly something very desirable, something DG Research should strive for: *"I would find this really great. This would be exactly what we should do. For many reasons. [...] Focusing on granting projects leads to focusing on certain abilities that you need. You have to be good in calculating, in accompanying projects, in managing projects. And this creates a distance with respect to policy-making. And that does not fit well together, that does not exist worldwide."* And he points out: *"If you look at the other DGs, actually they are already ministries. Hence, we should also already be a ministry - but we are a grant engine ("Fördermaschine"). This does not exist elsewhere in the world, to that degree. But what is a current trend everywhere, is that research, economy and innovation are becoming a political focus. Maybe I am too optimistic but right now during this search for growth and for new sources of growth, policy-makers in the areas of education, research and economy actually have the strongest voice. That means that we need more political expertise - which is hard to get if we stay a grant engine."* Asked about what his dreams for the not-too-distant future would be, he replies: *"My personal dream goal for DG Research and Innovation in 2020 would be: 400 people, programme overview instead of programme management, work programme, designing and direct influence on the political decisions."*

While this official, another Head of Unit in DG Research, and the Head of a Research Lobbyist Organization consider the shifting responsibilities as something natural and/or positive, the national research lobbyist identifies another reason for the new priority-setting. According to her, the recent trend towards policy-making instead of programme implementation rather constitutes a disempowerment of DG RTD, not the contrary. For her, giving up the competence to determine the content of the programmes weakens the position of DG Research instead of strengthening it: *"In the end, the Lisbon Treaty launched the process of disempowering of of DG Research or, at least, for the decrease of its responsibility to shape the content, which, in turn, set the course for the establishment of a research ministry."* The following chapter on 'agencification' will return to this thought.

A Deputy-Head of Unit in DG Research, shares her concern: *"My view is that at least the scientific aspects of the scientific components of the work programmes are going to be more diluted and are going to be less evident. So it is going to be more innovation oriented, more user-friendly oriented, and I would say more policy oriented.. Now all in all I think, what the Commission will have to do is [...] to synthesise all that. That will be the main work of the services, which will be left here because, you know, that the management will be hived off to an agency."*

Obviously, when considering the different opinions of the various stakeholders, it is important to bear in mind where they come from. From the perspective of a research lobby organisation, losing the grip on shaping the content of the programmes and on determining who will receive the award equals a considerable loss in power. Commission officials interested in policy-making would argue, on the contrary, that being able to focus on determining the broad policy directions and research foci of the programmes is much more influential. Hence, it depends very much on what you consider to be important. As he argues: *"I think they [the Commission colleagues] react very classically. They think that agencies are second rank. And that, you know, life is more prestigious and better in headquarters because that is where you do policy-making. 'Oh, I will participate in policy-making in Europe, while implementation is not important. [...] But there are conflicting views about that. Because very often people say that when you do the implementation, when you know the technique, when you get the immediate contacts [...] that is where actually [...] reality lies and that is where you actually know how to influence policy-making."*

Hence, there are contradicting opinions regarding the real implications of the shift. There seems to be little doubt about the fact that DG Research is actually turning into a research ministry and thus, follows an evolution that the other Commission DGs have already gone through. About whether this actually implies more or less power for the DG, depends on the perspective one is taking.

As one can also clearly see from the quotes, the shift from programme management to policy is generally linked to the outsourcing of the said management to executive agencies. In order to understand and assess its implications in the particular context of EU research policy, it is important to gain some knowledge on EU agencies in general and to put the events in the field of European research policy into this broader context.

4.2 Agencification and its consequences for European research policy

4.2.1 Agencification in Europe - theory and background

"The creation of European Union (EU) agencies is arguably one of the most prominent institutional innovations at the EU level in recent history. The rapid proliferation of EU agencies has led some to refer to it as genuine process of 'agencification', comparable to agency creation at the national level" (Gronleer 2009: 15). Indeed, agencies have become pervasive elements in the European administrative and governance system. Today, depending on the definition, more than thirty EU agencies exist, covering a broad range of topics, from the coordination of the management of the Union's external borders to the collection and analysis of information on drugs or occupational safety.

Agencies play an important role in implementing EU legislation and in regulating European policy sectors. In total, they spend over one billion euros per year and employ more than 4.000 staff (Busuioc/Gronleer/Trondal 2012: 3). To date, agencies have been created on a case-by-case basis, without an overall vision of their role. In 2008, the Commission issued a communication "European

agencies - The way forward" in which she argued that agencies can add important value to European governance. At the same time, the Commission admitted in her communication that there is no common understanding or agreement on the role of agencies.

In public management theory, the establishment of agencies is seen as an important aspect of the 'regulatory state'. 'Agencification', i.e. the establishment of agencies to which a broad range of tasks is delegated, is part of a paradigm shift in public management, often referred to as "New Public Management" (NPM), aiming at reducing differences between the public and the private sector and delegating different forms of autonomy. It has been argued that this transformation of public management organisation has led to a "*major shift in governance patterns*" (Ekelund 2010: 16). One facet of these changes has been the "*hiving off of executive competences from national ministries and the European Commission or the Council of ministers (in its executive role) to non-majoritarian, semi-autonomous agencies at the EU level*" (Busuioac/Groenleer/Trondal 2012: 3).

Although there is no universally valid definition of the term 'agency', scholars agree on some core elements of the concept (see Ekelund 2010: 23pp; also Thatcher 2002: 956).

1. An agency is at arm's length from central ministries and departments.
2. It has to have its own powers and responsibilities given under public law and be subject to at least some public/administrative law.
3. It has to be staffed by public servants and cannot be neither directly elected nor managed by elected officials.
4. The idea of performance contracting is central to governance by agencies.

Agencies are set up to perform a variety of tasks. Bouckaert and Peters (2004: 38-43) identify seven different types of agency functions, such as implementation (direct service delivery and/or transfer of funds, regulation of the economy and the society, information-gathering and dissemination or research, to name just a few.

According to Ekelund (2010: 4), the first agencies at the European level were set up in 1975: the European Centre for the Development of Vocational Training and the European Foundation for the Improvement of Living and Working Conditions. The first real 'wave' of agencification took place in the 1990s when nine agencies were established. The second wave followed between 2000 and 2006 when another eleven agencies were set up. Since 2008, the pace has accelerated even further, in particular with the advent of the European Supervisory Authorities in the financial services area. The establishment of Community agencies follows a pre-described procedure: the Commission presents a proposal, and then a decision is made either jointly by the Council and the European Parliament or by the Council following consultation of the EP.

According to Rittberger and Wonka (2012: 7), the proliferation of EU agencies is part of the transformation of the EU's "executive order". During this transformation process, the organisation and exercise of executive power in Europe have undergone massive changes, leading to the emergence of the European Commission as central executive actor. Agencies are designed to operate at arm's length from their political principals, which seems to be the guarantor of their

independence. One interesting question posed by scholar was to understand whether agencification within the EU has curtailed the growth of the Commission administration. Recent research, however, indicates that "*the mushrooming of EU agencies over time has occurred in parallel with expansion of the Commission's services*" (Egeberg/Martens/Trondal 2012: 25). The increased administrative capacity of both agencies and Commission services is mainly due to a general strengthening of supranational executive powers and to the enlargement waves (ibid: 27). In the following, it will become clear that this is not the case for DG Research.

Thanks to their legal status, EU agencies can function autonomously, apart from Community institutions. They can hire personnel, rent offices and procure supplies, which distinguishes them from bodies within the Commission structure, such as the Joint Research Centre (JRC) or the EU Anti-Fraud Office (OLAF). Usually, EU agencies are established for an indeterminate period of time. The so-called 'Executive Agencies' that assist the Commission in the implementation and management of Community programmes are different in this context since they have only a temporary mandate. Moreover, while being legally autonomous, executive agencies are subject to strict supervision by the Commission.³ Executive agencies are organisations established in accordance with a Council Regulation with a view to being entrusted with certain tasks relating to the management of one or more Community programmes. Contrary to the other agencies, the location of executive agencies has to be at the seat of the European Commission (Brussels or Luxembourg).⁴

4.2.2 Research agencies and their importance for the development of DG RTD

The recent trend of increasing vertical specialisation of EU administration in agencies is also true for DG Research, which 'outsourced' the management of the Framework Programme to a new executive agency. Created in December 2007, the *Research Executive Agency* (REA) started its work in June 2009. It carries out the evaluation of proposals and manages the research projects for a large part of the current Framework Programme FP7. The REA reports to the Directorates General for Research and Innovation⁵, Enterprise and Industry⁶, and Education and Culture⁷. On its website, the REA states very clearly: "*The REA has no policy remit: all research-related policy remains within the relevant European Commission services. As an executive agency, it focuses on management tasks outsourced by the Commission and fosters efficiency when addressing the research community's needs*" (http://ec.europa.eu/rea/about_us/index_en.htm).

³ Because of that, some scholars find the use of the term "agency" for those executive agencies confusing. The European Parliament suggested the term 'decentralised implementation unit' (Groenleer 2009: 28).

⁴ Currently, there are six executive agencies: Education, Audiovisual and Culture Executive Agency (EACEA), European Research Council Executive Agency (ERCEA), Executive Agency for Competitiveness and Innovation (EACI), Executive Agency for Health and Consumers (EAHC), Research Executive Agency (REA), Trans-European Transport Network Executive Agency (TENT-E EA).

⁵ <http://ec.europa.eu/research/index.cfm?pg=dg>

⁶ http://ec.europa.eu/enterprise/index_en.htm

⁷ http://ec.europa.eu/dgs/education_culture/index_en.htm

The delegation of programme management to executive agencies (as done with REA) builds on the assumption that the technical and the policy-relevant aspects of administration can be identified and organised separately. As writes Gornitzka: *"Giving executive agencies the tasks of managing EU programmes was intended to create efficiency gains and unleash capacity within the DG in order for it to take a 'more ministerial type approach'"* (Gornitzka 2012: 16). This is very much in line with the functionalist explanation of agency formation. As Egeberg/Martens/Trondal point out, *"agencies could relieve the Commission of specific administrative tasks, which would leave the Commission greater room to concentrate on giving political direction"* (ibid: 29).

The creation of DG Research's second Executive Agency, the *European Research Council's Executive Agency* (ERCEA) followed a different rationale. From the very beginning, it was the declared goal of the ERC to promote "investigator-driven frontier research" in all areas - and solely on the basis of scientific excellence. The discussion on the need to establish a European Research Council started from within the scientific community: *"There was a concern about funding being too low for basic research and about quality of science and its institutions in Europe and, as in European research policy in general, the USA provided a benchmark with which comparisons were made"* (Luukonen 2010: 21). If the European Commission was initially very sceptical of this initiative, her scepticism dissolved gradually - not least because of the broad support the ERC project enjoyed. This eventually resulted in the Commission taking the process into her own hands, adopting the project as her own project and putting it into the context of the realisation of the European Research Area. In its 2004 communication *"Europe and Basic Research"*, the European Commission interpreted the previous definition of the European added value in a new way - *"the added value which comes from competition at EU level"* - and therefore justified the setting-up of the European Research Council (Luukonen 2010: 25). This communication can be considered as the beginning of the agenda-setting by the Commission, part of her new assertiveness.

It is important to note that both REA and ERCEA - which were established at exactly the same time - are 'Executive Agencies' (see earlier). But one very important feature distinguishes them: while REA is directly accountable to the European Commission, ERCEA receives its directions from the ERC's Scientific Council. ERCEA, therefore, is a rather untypical agency. This is confirmed by a Head of DG Research's Unit in charge of the executive agencies and the Joint Undertakings: *"Yes, the ERCEA is an aberration. At the time, this was a political compromise. The administrative structure was adapted to the needs of the European Research Council. For instance that there are external members in the Steering Committee where there are normally only Commission officials and that we have recruited some of the management positions from outside. Hence, we have hired people who hadn't been Commission officials, but we have employed them as Commission officials in order to send them straight to the agency. This is an exception for the ERC Agency, as there are a number of other exceptions. Hence, this agency is atypical."*

But no matter whether it is an "aberration" or not - the ERCEA still remains an executive agency and is in charge of executing the ERC's annual work programme and managing the calls for proposals and

following their implementation. Thus, the example of the two research agencies confirms the trend I stated earlier: a hiving-off of administrative tasks from the DGs to the agencies, allowing the Commission services a strengthened focus on policy activities.

A Head of a national Liaison Office of Research Organisations sees a clear link between the outsourcing of management activities into the agencies and the new claim to leadership of the Commission's Research DG: "*The implementation is operationalised. If you want to have the steering authority of a ministry, you have to liberate yourself, you have to stop carrying out this research. Everything has to go, up to 70 per cent in the new Framework Programme.*" He seems to imply that the DG explicitly wants to become a ministry and therefore 'outsources' its programmes.

The Head of a Research Lobbyist Organization is interpreting the process in just the opposite way: the Commission now has the agencies, hence can delegate the programme management, hence becomes more like a research ministry: "*... in the sense that previously all of the programmes were managed within DG Research whereas now you have the agencies which actually do a lot of the management. So essentially what they have done is to separate the policy side of the things from the implementation side of things. And I think we will see that more as time goes on, because if the programme increases but your staffing does not increase, in a way you kind of have to outsource the work. So in a way you are right. If there is less focus on the implementation and more focus on the policy, it does become like a research ministry.*"

The issue of staffing, also mentioned by her, is an important one indeed. Already at the beginning of the 21st century, DG Research had approximately 1.000 staff. Today, 1.135 officials work in DG RTD, according to the European Commission's Statistical Bulletin dated July 2013. Hence, EU research policy is still one of the most endowed areas in terms of Commission officials. Adding the staff of related services in the Commission, we end up with a total of 1.852 staff. Only DG Translation has more staff (2.253, according to the Statistical Bulletin).⁸

For the Head of DG Research's Unit, this is one of the main reasons why things cannot continue the way they used to: "*We are a very big DG, currently spread over three buildings. For many colleagues, it gets difficult to keep the overview. [...] If we assume that an executive agency with 500 to 700 staff is still of a size where people are able to find their way, and where also the workflow is more transparent... And then comes the specialisation that we want to have.*" According to him, this specialisation is inevitable: With every Framework Programme, the budget increased. Staffing increased as well, but not proportionally. Hence, he argues, the Commission services alone cannot deal anymore with the programme implementation. But there is more to it: "*That's the first point. The second point is: how many souls can I have in my bosom? Right now, DG Research takes care of*

⁸ An interesting side observation is that DG Research also continues to be one of the DGs with the highest concentration of scientists. However, while law and the social sciences tend to be the prevailing overall education background of Commission officials in other DGs, the staff of DG Research tend to have a degree in science and technology. It would be interesting to examine whether this circumstance has any affect on the administrative culture in this particular DG.

project implementation, of the programming and of administering the funds. For 10, 15 years I have believed that we are able to merge the three - since I clearly see the relations between them. But for the majority of my colleagues, this is too much. [...] One of the three aspects has to be neglected. Hence, there needs to be a separation. [...] Programme management is giving to another structure. And the programming will stay within the ministries, within the Directorates General."

Also other observers of the Brussels scene see this trend - but nevertheless question the usefulness of transferring the entire practical knowledge into the agencies. As reasons a member of staff from a national innovation agency: *"I mean it is natural in one way that they want to move away from project implementation. But I also see a danger there because it is also a strength to be involved in the whole chain. [...] if they decentralise all the implementation, they will lose quite a bit of competence. [...] At the moment, of course, this is pushed by finance people, unfortunately, to put the administration costs down. But that is a real danger, I think."*

The Head of a Research Lobbyist Organization shares this concern: *"To me, the challenge with these agencies is to make sure that you do have a proper link between the policy direction and the people who are implementing, because you cannot implement without understanding the policy and you cannot make the policy without understanding the practicalities of the implementation. And I think that dialogue may have been missing a little bit."* Also a Deputy-Head of Unit in DG Research has very strong doubts regarding the separation between policy and implementation: *"Now, the criticism of the separation is when you start separating things that you cannot actually separate. Because what is going to be done in terms of implementation is very important for policy-making. For instance, if you spend so much money in terms of projects, we need to have the results of this project fed into the policy-making. And how are you going to organise that, since you will have much less staff in the headquarters? These people maybe will not have the time to do that. So you ask the implementing agency to do that. And the implementing agency then may have the tendency to do some policy-making itself - which it should not be doing."*

This official, like the Head of a Research Lobbyist Organization and the member of staff from a national innovation agency, wonders how the transmission of knowledge, the flow of information between the DG and the agencies, between those who decide upon the programmes and those implementing them will be assured. The person in DG Research in charge of that question remains rather vague. Says a Head of DG Research's Unit: *"This is part of the tasks my unit has to take care of. [...] We need to have a work methodology, in order for the result of the project implementation to flow back to the programming in the services. It would be too early to talk about what we have in mind, but it won't work without a transmission belt. [...] We have to deal with those projects that have just started. Because when they get their intermediate results in two, three years, we need to take the programming from there. Hence, there needs to be a transmission belt. And if we don't have it, the future structure won't work the way it should. But don't count your eggs before they are hatched."*

In addition to the issue of transmitting information and knowledge, the question of staffing is

another very important topic one has to look at when discussing the relationship between the executive agencies and the Commission services. Indeed, not least due to the financial crisis, the European institutions are under huge pressure to significantly reduce their staff. This also applies to the Commission services - and in particular to DG Research, being one of the biggest DGs. In this context, we should remember the Head of Unit in DG Research who dreamt about a DG with 400 staff.

How to get there? One obvious idea would be to send Commission officials to the agencies. And indeed, this is what is done. In February this year, DG HR presented an internal document called "*How to make the Executive Agencies attractive?*" Internally, the Commission plans to send 1.000 of their officials to the agencies. Right now, the majority of agency staff is composed of temporary and contract staff - the so-called "fonctionnaires" from the Commission only amount to 25 per cent. Having this in mind makes it easier to put a Head of DG Research's Unit's comments in context: "*Currently, we have an internal rule that limits the number of Commission officials in the agencies to eight per cent. We will have to dissolve this rule for a few years since we won't manage otherwise. Many colleagues fear that I will send them to an agency. [...] And one problem for the next few years is what to do with these several hundreds of colleagues, who are predominantly male, predominantly grey-haired, but still have to work for some more years. Some of them might indeed want to go to the agencies. As soon as they go to the agencies, their positions in the Commission will be frozen. That's a zero-sum-game. The positions cannot be filled again. [...] Actually, it is simple: For every two positions that we create in the agencies, we have to cancel one position in the Commission. Thus, if we create 1.000 new positions in the agencies, we have to cancel 500 positions in the Commission. [...] Money-wise it is much less expensive since in the agencies we predominantly hire contract staff and not the expensive 'fonctionnaires' and especially older and even more expensive 'fonctionnaires'.*"

Hence, what has to be done seems very clear: In order to get to a lean and efficient DG Research that can take care of ministerial tasks and at the same time in order to satisfy the external demands to cut staff and save money, two options are on offer: 1) convince as many Commission officials as possible to go to the agencies and continue doing programme implementation there and 2) to recruit external staff in the agencies only by offering temporary contracts which are much less costly and limited. A Deputy-Head of Unit in DG Research forecasts the developments as such: "*There will be a sort of 1.000 people leaving this DG to go to the agency, which would mean that there might be officially 800 people remaining in the DG. But that is unlikely because I think they also rely a lot on people going on retirement. So natural wastage and some streamlining. And I cannot imagine the Secretary-General and DG HR leaving a policy DG with 800 people. So we are talking rather of a number of losses here. I would say 500 at most, at most would be a sensible line. But you see a lot of policy DGs in here with 200 or 300 people. It all depends on what you say policy importance or policy activity is.*"

It is safe to say that DG HR and DG RTD face some challenges when attempting to convince staff to move to the agencies. Without attempting to provide answers, here are a few questions that remain to be discussed:

- One of the main arguments for passing the project management to the agencies is that the agencies are much more cost-effective. But what happens if the expensive Commission officials start moving to the agencies? This will have quite dramatic consequences for the agencies' payrolls.
- The Commission has to engage in a somewhat schizophrenic exercise: while on the one hand, it is always claimed that project management is not interesting and that it is far better to concentrate on policy, on the other hand the DGs have to promote the work done in the agencies in order to attract their officials to work there. How to handle that distortion?
- In order to convince Commission staff to work in the agencies, DG HR seems to be willing to offer a number of management positions there that are difficult to get in the Commission. This, in turn, leads to a multiplication of hierarchical layers in the agencies and to a lack of motivation on the side of the contract staff, who do not see any possibility for career advancement.
- The Commission would like to promote mobility between the staff in the Commission and the one in the agencies. But since moving to the agencies is a one-way street (as we could learn, the positions are frozen), how attractive is leaving the Commission if chances of returning are slim?

In sum, we can conclude that the outsourcing of project administration and implementation is an important element of the DG Research's becoming a sort of European ministry for research. What can be said as well is that the relationship between the DG and its agencies is not always straightforward and that a number of open questions remain. One of the most important topics to address is certainly the question of the "transmission belt" between the programme implementation and the programming, i.e. the policy-part. And an intriguing question to analyse consists in finding out whether giving up the management part actually constitutes an empowerment (as perceived by the three Heads of Unit in DG Research) or whether it rather equals a disempowerment. The answer to this question depends very much on the importance one assigns to understanding the "home base", i.e. the research on the ground.

4.3 The role of leadership in EU's research policy

Finally, a few words should be dedicated to the question of the role of leadership in shaping Europe's research policy. Since the mid-seventies, the main actor in Community research was the Directorate General for Research. This is still the case. However, whenever major leaps in EU research policy took place, they were very often due to the respective Commissioner. In the recent history of European research, three names stand out in particular: Ralf Dahrendorf, Philippe Busquin and Máire Geoghegan-Quinn.

Dahrendorf became the first Commissioner for Research whose portfolio was not linked to industry. His concept - or rather his dream - of the *European Research Area* shapes European research policy up to today. Thanks to him, research quit its niche existence and started to play a role on the European political arena.

After Dahrendorf, it took almost thirty years until a new Commissioner for Research entered the scene who jolted Europe's research community - and the Member States. Philippe Busquin revived Dahrendorf's concept of the European Research Area and managed to put it on the forefront of the political debate. In the following years, the discussion seemed to have lost some of its impetus.

It was only in 2007 that the discussion took off again, thanks to the new Irish Commissioner Máire Geoghegan-Quinn. When taking office, Geoghegan-Quinn could already look back at a remarkable career. In the eighties and nineties, she occupied a number of important positions in national politics. She served as Minister for Education, Minister for European Affairs, Minister for Tourism, Transport and Communications and Minister for Justice. Prior to her appointment as Commissioner for Research, Innovation and Science and until 2010, she served as Member of the European Court of Auditors.

Appointing her as Commissioner for Research was certainly not an obvious choice. None of Geoghegan-Quinn's previous positions had had any close relation to this topic. In office, her activities were - and still are - quite controversial. In particular, her insistence on linking research to innovation and innovation to research was and is not always well received. But what is maybe more important in the context of this paper is that she made her voice heard. She never stooped talking about the fact that *"we cannot build long-term sustainable growth without improving our research and innovation performance in Europe"* (speech at the Hannover Messe Trade Fair, 11 April 2013). It was Geoghegan-Quinn who made sure to rename DG Research into DG Research and Innovation.

And it was her who insisted on the importance of communicating science and of simplifying procedures in order to attract good scientists and to make the voice of researchers heard beyond the scientific disciplines. Under the aegis of Geoghegan-Quinn, the Commission launched a public competition about the name of the successor of the seventh Framework Programme. She wanted to get rid of the acronyms and identify a catchy title European citizens can relate to. Horizon 2020 certainly fulfills that.

Of course, one can argue that linking research to innovation to growth is very restrictive and does exclude a number of scientific fields, not least in the social sciences and the humanities. I certainly sympathise with this statement. But still I would argue that Geoghegan-Quinn found the right words at the right time. In order to make sure that money will be invested in research in Europe in - and despite - difficult economic times, she had to convince policy-makers that the science she wanted to promote was what is needed in order to get out of the crisis. As the Head of Unit in DG Research puts it: *"The idea of innovation which our Commissioner launched, is that we should put much more effort to being excellent research to the market. But that means working on the framework conditions."*

Growth, market, innovation - these were the buzzwords Geoghegan-Quinn used very effectively and convincingly in order to keep research on the European agenda. For me, this is a strong example of what leadership can be. She had a vision (disputable as it may be), found the right words to

communicate it, gathered supporters and always remained true to her beliefs.

To conclude, I quote a national research lobbyist, whose observation I consider very appropriate: *"The role of the Research Commissioner - or Commissioners - has become very stable; the role has become much more important than it previously was. I remember Philippe Busquin, and Philippe Busquin has, in principle, been the first Commissioner to have turned the Research Framework Programme into a major policy instrument. Hence, he had an important role as Research Commissioner. Potocnik had a very different agenda. One could say, of course say, that he might have been weaker, although I would not like to see it that way because he has been very active in the area of simplification, but perhaps less so on the political level. This may have been due to the fact that perhaps the time was not yet ripe for the next step. Geoghegan-Quinn may have just now caught this moment, also due to the economic crisis or triggered by the economic crisis, and can again play a very important role."*

It will be interesting to see what her successor as European Commissioner will do. Geoghegan-Quinn has set quite an example.

5. Conclusions and perspectives

In this master thesis, I have attempted to provide first answers to the question on whether we currently witness the transition of the European Commission's Directorate General for Research (and Innovation) into a European research ministry.

In order to do so, after a brief introduction to the topic, chapters two and three set the scene for the analysis to come, by introducing the most important events, the most relevant actors and the most significant concepts. Chapter two sketched the history of European cooperation and policy-making in the area of research, starting with the signing of the Treaty establishing the European Coal and Steel Community, taking into consideration the important legacy of Commissioner Dahrendorf in the seventies, and mentioning the significance of the introduction of the First Framework Programme for Research. I also touched upon the importance and consequences of the Lisbon Treaty and the revival of the notion of the *European Research Area* before closing with pointing at the current discussions around the relationship between 'research' and 'innovation' and the new programme *Horizon 2020*.

The third chapter illustrated the development of Community research and research policy from another angle by focusing on the tensions between supranational and intergovernmental approaches to European research activities, thereby mirroring the changing (power) relationship between the European Commission and the EU Member States. Due to its relevance for the shifting balance between Commission and Member States, the ERA concept was presented in some more detail. I then looked more closely at the building of executive governance in EU research policy, embodied by the role and self-understanding of the Directorate General for Research.

Building on these foundations, chapter four turned to answering the main research question along

three main lines of argumentation: the importance of a changing (geo-)political context, the illustration of an ongoing 'agencification' trend at the European level and the importance of leadership in asserting and shaping European research policy. I have argued that the combination of these three trends contributes decisively to a new understanding and increased relevance of research-policy-making at the European level, and, thus, to new horizons in EU research policy.

Thanks to the changes introduced by the Lisbon Treaty, the promotion of scientific and technological advance in its own right became, for the first time, a special objective of the EU and a "shared competence" between the EU level and the Member States. Also, achieving the *European Research Area* became an obligation for both stakeholders, with the Union being entitled to adopt all measures it deems necessary to achieve it. In the first decade of the 21-st century, not least thanks to the changing geopolitical situation and to the implications of the financial and economic crisis, research, innovation and knowledge were put in the heart of European policy-making.

The European Commission was able to seize the opportunity and to push strongly for a renewed approach to European R&D, with its Directorate General as the main driving force. The discussions around the development of the new research programme Horizon 2020 serve as an excellent example for this new self-concept of the Commission's services in charge of research. The new claim to leadership is also illustrated by the changing linguistic usage in DG Research. While before, programme management and programme implementation was the proud core of DG RTD's activities, focus is now being laid on the DG becoming "*much more strategic*", "*much more policy-oriented*", "*programme overview instead of programme management, designing and direct influence on the political decisions*".

These ambitions go hand in hand with the striving for a much leaner Commission service in charge of research policy. The outsourcing of the nowadays much less prestigious programme management to external agencies is perceived as a way to achieve that. Currently, there are two external agencies, the *Research Executive Agency* and *European Research Council Executive Agency* that have been tasked with running the European research programmes - with the "political parts" of these programmes being withheld in the Commission. As it was said, the trend to outsource the implementation goes hand in hand with a significant reduction of staff within the DG. While up to now, DG Research is one of the most staffed DG in the Commission (with approximately 1.800 staff), this number will decrease considerably over the next few years. Hence, what we might have to expect is a DG with around 400 officials, who focus exclusively on shaping European policy in the area of R&D - and this more and more in cooperation with the other Directorates General in the Commission.

Finally, I have advocated the importance of leadership for enhancing the visibility of European research activities and European research policy. The current Commissioner Geoghegan-Quinn has contributed decisively to putting this topic on the European agenda

To conclude, I would argue that we are indeed witnessing the shift of DG RTD towards a research

ministry. Whether this development is positive or negative is another question and depends also very much on the position and perspective one is coming from and the importance one attributes to following science "on the ground". What can be stated, however, is that this development brings DG RTD closer to the majority of its "sister" ministries in the Commission, which are performing ministerial tasks since many years. As it was said earlier, DG Research's focus on programme management and its very generous staffing rather were an exception to the rule than the rule itself.

These developments I illustrated in this thesis pose a number of questions that future research might find worth exploring. The following are just a few of them:

- How can the separation between programme management and policy-making be organised and maintained? How can be avoided that the agencies do not start to engage in policy-making themselves, given that in the near future they might know much better what is going on the ground?
- How can the flow of knowledge and information between the policy-making DGs and the executive agencies be assured? So far, the Commission only seems to be aware of the need for a "transmission belt". How this transmission belt has to be operationalised, however, remains still an open question - but a question that needs to be resolved quite urgently. What seems to be clear to me is that the DG can ill afford losing the grip on the scientific content and programmes of its projects - if it wants to be able to do sensible research policy.
- How can the development of a "lean" DG RTD be realised? The expensive 'fonctionnaires' cannot be laid off and, thus, a considerable number of them have to be convinced to move to the agencies. However, since the agencies are in charge of carrying out the loathed programme management, how can working in the agencies be made attractive to them?
- Is the dramatic increase of external consultations the best way for the DG to achieve visibility and transparency and to do away with the image of thinking "inside the box"?
- What more can be done to increase the visibility of research activities at the European level to a broader public? This would potentially enhance the general support for increased funding in European R&D, something that is crucial in today's economic situation.

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Appendix: List of abbreviations

CERN European Organization for Nuclear Research
COM European Commission
COST European Co-operation in Science and Technology
DG Directorate-General (in the European Commission)
EEC European Economic Community
EMBO European Molecular Biology Organization
EP European Parliament
ERA European Research Area
ERC European Research Council
ERCEA European Research Council Executive Agency
ESCS European Coal and Steel Community
ESO European Southern Observatory
EU European Union
EURATOM European Atomic Energy Community
FP Framework Programme (for Research)
MS Member States of the European Union
R&D Research and Development
REA Research Executive Agency
SEA Single European Act
TFEU Treaty for the Functioning of the European Union